### **Air Force Materiel Command**

Developing, Fielding, and Sustaining America's Aerospace Force



# Systems Engineering Revitalization 22 Oct 02

Karen B. Bausman
AFMC/EMPD
DSN 787-6134
Karen.bausman@wpafb.af.mil



### **Overview**



### **Overview**

**Background** 

**SE Revit Prog** 

**Deployment** 

- Background
- SE Revitalization Program
  - Institutionalizing Systems Engineering
  - Education and Training
  - Collaboration with Industry
- Summary





# **Background**



#### Overview

**Background** 

**SE Revit Prog** 

**Deployment** 

- What are the problems?
  - Long development cycle times
  - Requirements instability
  - Discipline eroding/being lost
  - Workforce aging, losing corporate memory
  - New employees, more transient, not "lifers"





## **Background**



### Overview

**Background** 

**SE Revit Prog** 

**Deployment** 

Summary

### What we have done

- Implemented Airworthiness and OSS&E—rigorous application of discipline—ensuring compliance
- Assigned product line technical responsibility to Enterprises—consistent application of acquisition and sustainment processes
- Instituted Unit Compliance Inspections for engineering
- Celebrating Year of Engineer and Scientist (YES)—emphasize future workforce retention and recruiting needs





# **SE Revitalization Program**



Overview

**Background** 

**SE Revit Prog** 

**Deployment** 

**Summary** 

Institutionalizing Systems Engineering

- Education and Training
- Collaboration with Industry and Associations
- Institute for Systems Engineering



# Institutionalizing Systems Engineering

AFMC

Overview

**Background** 

**SE Revit Prog** 

**Deployment** 

- Systems Engineering Voice at the Table
- Must Establish Top-Level Commitment to SE
  - SECAF Memo to MAJCOMs & PEO Chain
- Potential AFI 62-101 on Systems Engineering
- Potential Career Field Enhancement
  - Military -- "-S" Annotation for 62XX and 63XX for SE and Project Management
  - Civilian -- New Job Series (0805 or 0801S) to identify Systems Engineers



### **Education and Training**



Overview

**Background** 

**Deployment** 

Summary

**SE Revit Prog** 

 Identify Systems Engineering Master's **Programs Across USA** 

- Encourage AFIT Systems Engineering Certification
  - Available starting 6 Oct 02
  - 3 Core Classes plus 2 electives
  - Goal to be offered Distance Learning FY04





# **Education and Training**





Overview

**Background** 

**SE Revit Prog** 

**Deployment** 

Summary

### **Training Pyramid**

SE Orientation

4 Hour
For all AFMC
Gen Lyles Keynote

### Applied SE Mgmt

Available Jan 03, Targeted to
Acquisition and Sustainment
Program Personnel Across AFMC
All functional areas

### **SE Pocketbook**

Learn what "INFO" Systems Engineering produces how to use it for program decisions





### **Collaboration with Industry**



Overview

Background

**SE Revit Prog** 

Deployment Summary  Incentivize Good Systems Engineering in Contracts

- Interaction with Industry Partners
- AF Become Corporate Member of NDIA/INCOSE
- Support Technical Committee/Working Groups
- Participate in SE Conferences





### Institute of Systems Engineering



Overview

**Background** 

**SE Revit Prog** 

**Deployment** 

Summary

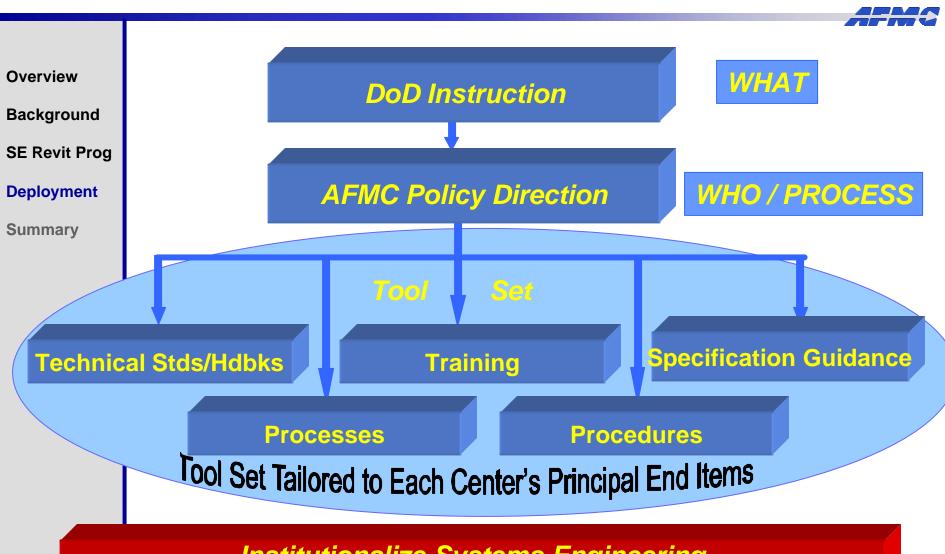
**Detailed Briefing To Follow!** 





### **SE Revitalization Deployment**





Institutionalize Systems Engineering
Deploy Policy, Obtain Feedback, and Assess Effectiveness



### **Summary**



Overview

**Background** 

**SE Revit Prog** 

**Deployment** 

- Developing Recommendations Addressing SE Across the AF and OSD, including the role of an Institute of Systems Engineering
  - Potential for Policy and Instruction
- Establishing EN Organizations at ALC's
  - Systems Engineering POC Needed
- Update Military and Civilian Career Fields
- Create "Systems Engineering for Everyone"
   Guide
- Champion SE Education/Training
- Encouraging Interaction with INCOSE/NDIA

